

their second year, and finally dark gray-brown, and armed with numerous stout often curved red-brown shining spines 3-4 cm. in length. Flowers at the end of May. Fruit ripens from the 1st to the middle of October.

PROVINCE OF QUEBEC: Dry limestone ridges near the south bank of the St. Lawrence River in the Caughnawaga Indian Reservation, and on Montreal Island at Highlands and Rockfield, *J. G. Jack*, September and October 1899, May and September 1901 and 1902.

AN INTERESTING FORM OF *LEERSIA ORYZOIDES*. — During the latter part of September, 1902, while collecting along the tidal shores of the Merrimac river near "the laurels" in the western part of Newburyport, Mass., in company with Mr. Oakes Ames and Mr. R. G. Leavitt, I chanced to examine an apparently sterile grass that grew on the tide-swept shores, and found it to be a cleistogamous, smooth *Leersia*. It grew to about fifteen inches in height, and its leaves were horizontally spreading, soft and flaccid. Several specimens were taken home, and a study showed them to be very similar to *L. oryzoides* Swartz. Several trips made in the vicinity of Seabrook, New Hampshire, to observe this species growing in the field resulted in the interesting discovery that while *L. oryzoides* is often cleistogamous when growing in air, it is always rough under such circumstances; but when growing submersed it is *always* cleistogamous and *smooth*.

On another trip to the Newburyport locality in company with Mr. M. L. Fernald, a diligent search revealed a patch extending up the shore from well within the influence of the tide to nearly out of its reach. The lower part of this patch was identical in all respects with the plants of my first collection, while the upper part was the typical rough form with exserted panicles, thus beautifully demonstrating the oddity to be a physiological form, produced by submersion. It may be described as follows:

L. ORYZOIDES forma **glabra**. Submersed or inundated regularly by tides; a few inches to $1\frac{1}{2}$ ft. tall, smooth; leaves horizontal, soft and flaccid, each bearing a cleistogamous panicle in its sheath, the terminal with sheaths swollen by the enclosed flowers, but never rupturing. Spikes as in the type, but with fewer setae. — ALVAH A. EATON, The Ames Botanical Laboratory, North Easton, Massachusetts.